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1 UNITED STATES PATENT AND TRADEMARK OFFICE

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4 BEFORE THE BOARD OF PATENT APPEALS
5 AND INTERFERENCES
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8 *Ex parte* WILLIAM JAMES OTTER
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11 Appeal 2008-3537
12 Application 10/643,660
13 Technology Center 3700
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16 Decided: September 23, 2008
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19 *Before* MURRIEL E. CRAWFORD, JENNIFER D. BAHR, and
20 MICHAEL W. O'NEILL, *Administrative Patent Judges*.

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22 CRAWFORD, *Administrative Patent Judge*.
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25 DECISION ON APPEAL
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28 STATEMENT OF CASE

29 Appellant appeals under 35 U.S.C. § 134 (2002) from a final rejection
of claims 27 to 43. We have jurisdiction under 35 U.S.C. § 6(b) (2002).

30 Appellant invented a heat exchanger component having a plurality of
31 metal condensing flow passages each having a surface and a film formed on
32 the surface of the passages (Specification 2).

Claim 27 under appeal reads as follows:

27. A heat exchanger component comprising:

a plurality of metal condensing flow
passages each having a surface; and

a film formed from a melted polyester
applied directly to the surface of the plurality of
metal condensing flow passages.

REJECTION

The Examiner rejected claims 27 to 43 under 35 U.S.C. § 103(a) as
being unpatentable over Boah in view of Keneipp.

PRIOR ART

The prior art relied upon by the Examiner in rejecting the claims on
appeal is:

| | | |
|---------|-----------|---------------|
| Keneipp | 3,307,996 | Mar. 07, 1967 |
| Boah | 4,953,511 | Sep. 04, 1990 |

Appellant contends that the prior art does not disclose a film formed
from a method in which polyester is applied directly to the surface of a
plurality of metal condensing flow passages.

Appellant also contends that Keneipp is not analogous art.

Appellant further contends that the cited prior art does not disclose a
film formed of a polymer selected from one of polyetherimide,
polyethersulfone, polysulfone and polyimide.

ISSUES

The first issue is whether the Appellant has shown that the Examiner erred in concluding that the claims are obvious over the prior art because neither reference discloses the method of forming the film on the surface of the flow passages.

The second issue is whether the Appellant has shown that the Examiner erred in concluding that the claims are obvious over the prior art because Keneipp is not analogous art.

The third issue is whether the Appellant has shown that the Examiner erred in concluding that the claims are obvious over the cited prior art because the prior art does not disclose a film formed of a polymer selected from one of polyetherimide, polyethersulfone, polysulfone and polyimide.

FINDINGS OF FACT

Appellant discloses a heat exchanger as depicted in Figure 2 having passages 18. Appellant discloses a method of forming a film on the surface of the passages that includes the steps of heating the surface and applying a melted thermoplastic directly on the surface (Specification 4). The thermoplastic film is formed on the surface upon cooling. The thermoplastic film is any thermoplastic polymer that is capable of being adhered to or is capable of being modified to be adhered to the heated surface (Specification 5). While Appellant discloses that there are several drawbacks to the use of polypropylene, Appellant states that polypropylene can be employed (Specification 1, 5). The film is applied to the surface to prevent corrosion from water vapor liquid condensate (Specification 1).

Boah discloses a heat exchanger having a plurality of metal condensing flow passages 62 (col. 2, ll. 37 to 43; col. 4, ll. 44 to 45). Each of the passages 62 has a flat metal surface (61) and a film (53) of polyolefin such as polypropylene plastic laminated to the surface (col. 2, ll. 37 to 43). The film is utilized to increase the corrosion resistance of the metal surface in an environment exposed to corrosive flue gas condensate (col. 2, ll. 6 to 10).

Keneipp discloses that a liner 16 comprised of polyethylene, polypropylene, or polyester may be placed against an adhesive interior of a pipe so as to adhere to the pipe to provide corrosion resistance against water within the pipe (col. 1, ll. 9 to 13, 37 to 44; col. 3, ll. 39 to 44; Figure 7).

ANALYSIS

We are not persuaded of error on the part of the Examiner by Appellant's argument that the Examiner erred in concluding that the claims are obvious over the prior art because neither reference discloses the method of forming the film on the flow passages. Independent claims 27 and 36 before us on appeal are product claims which include method limitations regarding the formation of the film. As such, the claims are product-by-process claims. The Federal Circuit has repeatedly emphasized that, "[i]f the product in a product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *SmithKline Beecham Corp. v. Apotex Corp.*, 1439 F.3d 1312, 1317 (Fed. Cir. 2006), quoting *In re Thorpe*, 777 F.2d 695, 697 (Fed. Cir. 1985). Moreover, "when the PTO shows sound

1 basis for believing that the products of the applicant and the prior art are the
2 same, the applicant has the burden of showing that they are not.” *In re*
3 *Spada*, 911 F.2d 705, 708 (Fed. Cir. 1990) (citation omitted).

4 In the instant case, the Examiner is of the opinion that as the flow
5 passages of Boah include a film that is laminated to the surface thereof, the
6 claimed film is obvious in view of the Boah film as modified by the Keneipp
7 polymer. In our view, the Examiner has presented a sound basis for
8 reaching this conclusion because both surfaces have a polymer film formed
9 thereon. Therefore, the burden shifted to the Appellant show that the
10 claimed film formed on the surface of the flow passage is not the same as the
11 film formed on the flow passage in Boah as modified by Keneipp. This the
12 Appellant has not done.

13 We are also not persuaded by Appellant’s argument that Keneipp is
14 not analogous-art. The analogous-art test requires that a reference is either
15 in the field of the Appellant’s endeavor or is reasonably pertinent to the
16 problem with which the inventor was concerned in order to rely on that
17 reference as a basis for rejection. *In re Oetiker*, 977 F.2d 1443, 1447 (Fed.
18 Cir. 1992). References are selected as being reasonably pertinent to the
19 problem based on the judgment of a person having ordinary skill in the art.
20 *Id.* (“[I]t is necessary to consider ‘the reality of the circumstances,’-in other
21 words, common sense-in deciding in which fields a person of ordinary skill
22 would reasonably be expected to look for a solution to the problem facing
23 the inventor.” (quoting *In re Wood*, 599 F.2d 1032, 1036 (C.C.P.A. 1979))
24 *In re Kahn*, 441 F.3d 977, 986-87. *See also In re Clay*, 966 F.2d 656, 659
25 (Fed. Cir. 1992) (“[a] reference is reasonably pertinent if, even though it

1 may be in a different field from that of the inventor's endeavor, it is one
2 which, because of the matter with which it deals, logically would have
3 commended itself to an inventor's attention in considering his problem.”).

4 In addition, in *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727 (2007),
5 the Supreme Court said that “*any* need or problem known in the field of
6 endeavor at the time of invention and addressed by the patent can provide a
7 reason for combining the elements in the manner claimed.” 127 S. Ct. at
8 1742 (emphasis added). Therefore, it is clear that from the second part of
9 the *analogous-art* test stated in *Clay*, *supra*, even though a reference may be
10 in a different field from that of the inventor's endeavor, it is still analogous
11 art if it is one which, because of the matter with which it deals, logically
12 would have commended itself to an artisan's attention in considering *any*
13 need or problem known in the field of endeavor.

14 In the instant case, Keneipp relates to the problem of protecting a
15 metal surface from corrosion caused by water. The Appellant's problem is
16 protecting a metal surface from corrosion caused by water. As such,
17 Keneipp logically would have commended itself to an inventor's attention in
18 considering his problem of preventing or resisting corrosion caused by water
19 vapor condensate.

20 In view of the foregoing, we will sustain the Examiner's rejection of
21 claim 27. We will also sustain the rejection of claims 28 to 35 because the
22 Appellant has not made arguments as to the separate patentability of these
23 claims. In this regard, although the Appellant argues the patentability of
24 claim 29, the Appellant makes the same arguments with regard to this claim
25 as was made in regard to claim 27.

1 We will likewise sustain the Examiner's rejection of claim 30 because
2 in our view, the Examiner has a sound basis for believing that the surface of
3 the heat exchanger having a film placed thereon using a roller is no different
4 than a surface in which the film is applied by lamination as is disclosed in
5 Boah. As such, the burden shifted to the Appellant to show that the process
6 limitation of using a roller assembly to adhere the film results in a different
7 surface for the passages of the heat exchanger. This the Appellant has not
8 done.

9 We are not persuaded of error on the part of the Examiner by
10 Appellant's argument that the claim 36 is patentable because the prior art
11 does not disclose a film formed of a polymer selected from one of
12 polyetherimide, polyethersulfate, polysulfone and polyimide. We agree with
13 the Examiner that the selection of a particular thermoplastic polymer is a
14 design choice well within the skill of the artisan which without proof of
15 unexpected results would not patentably distinguish the subject matter of
16 claim 36. We note that the Appellant has admitted that any thermoplastic
17 polymer can be used on page 5 of the Specification and that the Appellant
18 has not submitted evidence of criticality or unexpected results. *See In re*
19 *Kuhle*, 526 F.2d 553 (CCPA 1975). In view of the foregoing, we will
20 sustain the Examiner's rejection of claim 36. We will also sustain the
21 rejection as it is directed to claims 37 and 38 because the Appellant has not
22 argued the separate patentability of these claims. We will further sustain the
23 rejection as it is directed to claims 39 to 43 because the Appellant advances
24 the same argument with regard to the patentability of these claims as we
25 found unpersuasive when directed to claim 27.

1 The decision of the Examiner is affirmed.

No time period for taking any subsequent action in connection with
this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R.
§ 1.136(a)(1)(iv) (2007).

6 AFFIRMED

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